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EXAMINER

CHEN, TIANJIE

ART UNIT PAPER NUMBER

2652

DATE MAILED: 06/14/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/929,009

Applicant(s)

LIN, CHI-CHENG

Examiner

Tianjie Chen

Art Unit

2652

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,8-11 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-11 and 13-20 is/are allowed.
- 6) ☒ Claim(s) 1-4,8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Final Rejection

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Morikawa et al (US 5,267,105).

With regard to claim 1, AAPA shows a cover-locking mechanism in Figs. 1 and 2 for an optical storage carrier player, the cover-locking mechanism comprising: a stopping switch and a cover-lifting switch (Specification p. 2, lines 4-6) for receiving actuating signals from a user; a cover disposed on the carrier player and selectively actuated to enter an open state for placing or removing a carrier 11; a driving unit 13 disposed on the carrier player for supporting and rotating a optical storage carrier 11 within the carrier player; a locking means disposed on the carrier player for selectively engaged with or separated from the cover.

AAPA does not show a controller coupled to the switch and the driving unit for detecting a rotational speed of the driving unit, the controller comprising: a rotation speed detection module for detecting the rotation speed of the driving unit; a comparative module coupled to the detection module for comparing the rotational speed with a pre-determined speed; wherein the locking means is actuated by the controller to be separated from the cover to make the cover enter the open state when

Art Unit: 2652

the actuating signal is presented at the switch and the rotation speed is lower than the pre-determined speed.

Morikawa et al shows a disk drive, wherein a controller coupled to a switch 32 (Column 7, lines 39-40) and the driving unit for detecting a rotational speed of the driving unit to determining if it is stopped (Fig. 5, step 517), the controller comprising: a rotation speed detection module for detecting the rotation speed of the driving unit (Fig.5, step 517); a comparative module coupled to the detection module for comparing the rotational speed with a pre-determined speed to determine if it is stopped or not (Fig. 5, step 517); wherein the drive is ready for ejection when the actuating signal is presented at the switch and the rotation speed is lower than the pre-determined speed.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to replace two switches in AAPA's device with one switch taught by Morikawa et al. The rationale is as follows: in AAPA's device, two switches are used by user. Except the completeness of the structure, there is also risk hidden in operation since if the user touches the cover-opening switch too early, it may causes damage of the reading head and disk. Morikawa et al's structure ensures that the ejection is done after the disk has been fully stopped; it protects the head and disk. One of ordinary skill in the art would have been motivated to replace two-switch structure by Morikawa et al's one-switch structure thus protecting the head and disk. In thus constructed device, at the time for ejection, the locking means is actuated by the controller to be separated from the cover to make the cover enter the open state when the actuating signal is presented at the switch and the rotation speed is lower than the pre-determined speed.

Art Unit: 2652

With regard to claim 1, in the above constructed device, the cover can be actuated to enter a locked up state that capable of preventing the cover from being opened when the rotation speed of the carrier is higher than the predetermined speed; the controller further includes an inherent signal generation module, capable of generating a speed-reduction signal transmitting to the driving unit for reducing its rotation speed as the rotation speed is higher than a predetermined speed (column 8, lines 30-34) and AAPA shows the actuating signal is presented at the switch ; and the signal generation module, capable of generating an output signal to make the cover enter the open state as the rotation speed is lower than a predetermined speed and the actuating signal is presented at the switch.

With regard to claim 2, AAPA shows in Fig. 1 a cover-engaging unit capable of selectively driving the locking means to release the cover to the open state.

With regard to claim 8, Official Office is taken: at the time the invention was made, it is a widely used technique that a disk drive, such as DVD player, is remotely controlled. Applicant does not disclose particular structure for remotely control. One of ordinary skill in the art would have been expecting that a remotely control method could be involved in the device.

2. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Morikawa et al as applied to claim 2 above, and further in view of Ito (US 3,938,185).

With regard to claim 3, AAPA shows a cover-engaging unit, which has a slidable protruding block, the protruding block is engaged with the cover when the cover is

Art Unit: 2652

closed and the protruding block is separated from the cover when the cover is lifted; but fail to show a solenoid for control.

However, Ito shows a locking mechanism in Fig. 4 including a solenoid valve and the locking means is a slidable protruding block, the protruding block is engaged with the cover when the solenoid valve is power-off, and the protruding block is separated from the cover when the solenoid valve is power-on.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to replace locking mechanism in AAPA's device with the solenoid and slidable block taught by Ito in AAPA and Morikawa et al's device. The rationale is as follows: in AAPA and Morikawa et al's device, the locking mechanism is controlled by the control signal, and the control signal can be used to control a solenoid 7 (Fig. 2; column 5, lines 7-10); but without detailed structure of actuating the locking mechanism. Ito shows a locking mechanism, wherein the locking mechanism is actuated by a solenoid with a slidable block. One of ordinary skill in the art would have been motivated to replace the locking mechanism with the one taught by Ito, thus making the locking mechanism being actuated by a control signal through a solenoid.

With regard to claim 4, in the above constructed device, the locking means is an electromagnet, the electromagnet is engaged with the cover when the electromagnet is power-on, and the electromagnet is separated from the cover when the electromagnet is power-off.

Allowable Subject Matter

3. Claims 9-11 and 13-20 allowed.

The following is a statement of reasons for the indication of allowable subject matter:

- With regard to claim 9, as the closest reference, the above constructed AAPA and Morikawa et al (US 5,267,105) device includes controller provides rotation speed signal; **but fails to show** that the driving unit of step (a) is detected by transforming a sine wave signal generated by the driving unit into a series of pulse signal with intervals.
- With regard to claim 16, as the closest reference, AAPA and Morikawa et al (US 5,267,105) device includes controller generating an open signal to actuate a cover to enter open state; **but fails to show that** it happens, as the intervals of the pulse signal are larger than a predetermined interval.
- Applicant asserts that this system would ensure the lifting up of the CD cover being under a safe state to reduce time for lifting up (Specification, p. 2, lines 26-28).

Response to Arguments

4. Applicant's arguments filed 03/24/2004 have been fully considered but they are not persuasive. Because Morikawa et al (US 5,267,105) shows a controller 43 in Fig. 11 and Ito (US 3,938,185) shows a controller 31 in Fig. 6.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is (703) 305-7499. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2652

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chen Fong
TIANJIE CHEN
PRIMARY EXAMINER 06/10/04